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ABSTRACT

Focusing on the experiences of five southern states using teacher testing policies, this survey provides evidence of shared experiences and lessons learned despite the existence of five different sets of certification requirements. The first section of the report concentrates on the national context for the movement toward teacher testing. Conflicting trends in education involving projected teacher shortages and concerns for improved teacher quality and professionalism are identified as some reasons for the current popularity of teacher testing. The second section of the report focuses on the five states: Florida, Georgia, Louisiana, North Carolina, and South Carolina. It highlights why these states decided to change certification requirements, as well as how they implemented new testing programs with what consequences. Specific attention is paid to the impact the different kinds of tests have had on schools of education, the teacher supply, and the local school districts. Repercussions these changes have had on the overall state education system, especially in indicating power shifts in policymaking, are identified. These findings are discussed in terms of their implication for the wider issue of the development of the teaching profession. (Author/JD)

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IMPACTS OF TEACHER TESTING: STATE EDUCATIONAL GOVERNANCE THROUGH STANDARD-SETTING

by

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The RAND Corporation

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PREFACE

The study reported herein is a first look at the impact of teacher testing in five southeastern states. The testing of beginning teachers is a major change in the procedure for certifying teachers. Some findings of this study have been incorporated in *Licensing Teachers: Design for a Teaching Profession*, Santa Monica, California, The RAND Corporation, R-3576-CSTP, November 1987. Other findings of this study will appear in forthcoming reports of RAND's Center for the Study of the Teaching Profession.

Arthur E. Wise
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IMPACTS OF TEACHER TESTING

Public concern about the quality of public school education during the 1970s has contributed to the growing concern about the quality of the teachers during the 1980s. The result has been a widespread reexamination and revision of teacher certification policies, particularly the addition of a testing requirement before and after initial certification.[1]

This paper examines a number of impacts related to this trend. Focusing on the experiences of five southern states using teacher testing, this survey provides evidence of shared experiences and lessons learned despite the existence of five different sets of certification requirements. And because teacher testing has been more widely applied in the South, and at an earlier date, the consequences of teacher testing in these states foreshadow national trends and impacts.

Because this study stresses the wider applicability of the South's experiences, the first section of the report concentrates on the national context for the movement toward teacher testing. Conflicting trends in education involving projected teacher shortages on the one hand, and concerns for improved teacher quality and professionalism on the other, are identified, as are some reasons for the current popularity of teacher testing. Finally, a recent survey of state activity concerning certification is reviewed.

The second section of the report focuses on the experiences of five states: Florida, Georgia, Louisiana, North Carolina, and South Carolina. In particular, it highlights why these states decided to

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[1]The movement to test teachers is popularly referred to as "teacher competency testing," probably because it followed on the heels of student competency testing. In both cases the use of the term "competency" is curious. As an adjective, it adds nothing that is not already implicit in the term "testing." Neither does the term denote a specific type of competency test. Indeed, the phrase is used to refer to a wide variety of testing in basic skills, subject matter, pedagogical knowledge, and even performance. The main purpose of the phrase seems to underscore the distinction between "competence" and "incompetence." Henceforth, we will refer simply to "teacher testing."

change certification requirements, as well as how they implemented these new testing programs and with what consequences. Specific attention is paid to the impact the different kinds of tests have had on schools of education, the teacher supply, and the local school districts. Finally, we identify the repercussions these changes have had on the overall state education system, especially in signaling power shifts in policymaking.

The final section discusses these findings in terms of their implication for the wider issue of the development of the teaching profession. During a time when there is increased support for making teaching more professional, do these changes in certification help or hinder the process either in terms of the criteria applied or the attendant shifts in decision-making powers? The conclusion speculates on the range of possible consequences and the need to formulate more sweeping changes in teaching conditions in order to promote both teacher quality and professionalization.

I. NATIONAL TRENDS

CURRENT STATE OF THE TEACHING PROFESSION

Recent data indicate changes in the recruitment and retention patterns of the American teaching force, in the quality of teachers, and in the attractiveness of teaching as a profession.

Once a relatively attractive occupation, teaching drew professionally oriented men and women with few other career options, talented black men and women barred from other fields, and white men valuing security. While teaching may not have attracted the most academically able of young people, recent studies have found the academic ability of those choosing to teach has declined (Weaver, 1979, 1981; Vance and Schlechty, 1982; National Center for Education Statistics, 1983). A number of factors contributed toward this trend. During the 1970s, a decreasing public school population created a surplus of teachers, thus discouraging new entrants. At the same time, new career opportunities began to open to all social groups. The low public image of teaching combined with low teachers' salaries discouraged talented young people from considering teaching as a career (Darling-Hammond, 1984).

As a result, both the absolute number and perceived academic quality of new entrants has declined. This trend, coupled with pending retirements of a large proportion of the current teaching force and increasing public school enrollments, will produce a general shortage of academically qualified teachers in the next several years (NEA, 1983; NCES, 1980, 1982). Currently, teacher shortages in areas like mathematics and science have begun to spread to other secondary subject areas; elementary education will experience such shortfalls by about 1988. Meanwhile, the most academically able teaching recruits leave teaching earlier and in much greater proportions than others (Vance and Schlechty, 1982; Schlechty and Vance, 1981). While the magnitude and timing of these trends vary from state to state, taken as a whole they signal the waning attractiveness of the teaching profession.

Concurrently, the frustration with the character and products of teacher education institutions continue to grow in many states. The long-standing and well-known complaints about teacher preparation programs include: Trivial methods courses consume too much of a prospective teacher's educational time at the expense of disciplinary preparation; admissions standards to teacher education programs are too low and graduation is virtually automatic; prospective teachers receive too little clinical preparation for actual classroom teaching; and so on.

Prospective teachers receive a less adequate general and liberal arts education than students bound for nearly all other professions and many occupations. While most prospective secondary school teachers complete a major in a content area, they take fewer credits in the major and fewer of these courses at the upper level. The fractionated curriculum prescribed for prospective elementary school teachers does not provide depth in any area (Galambos, 1985).

Thus, the public perceives teachers as less well-educated than many other college graduates. The prestige of teaching suffers and, more importantly, the public is less likely to accord teachers the level of trust given other professionals.

Concept and Goals of Teacher Testing. Prior to the advent of teacher testing, most states certified teachers by verifying that they had graduated from an approved or accredited teacher education program and had taken the requisite number of courses in the particular areas required for a specific teacher's certificate. The program review process, thus, provided the center piece of state certification procedures.

Many knowledgeable scholars and practioners have questioned the utlity of accreditation and state program approval due to the lack of uniformity and rigor in the criteria and assessment techniques (*of* Cronin, 1981; Wheeler, 1980; Getzels, 1977). In part this reflects disagreement within the profession concerning education goals. Moreover, research has provided no clear relationships between teacher characteristics and educational outcomes, nor between training strategies and teacher characteristics. (For example, see Koff and Florio, 1977, pp 5-6).

In this context, testing, a presumably objective measure of student (or program) performance, appears an attractive alternative to certification processes based on course or program approval. While such tests fail to resolve fundamental questions concerning education goals or teacher characteristics, testing advocates argue that they still provide a better measure than mere course completion in determining whether a candidate possesses minimal skills that might be prerequisites to successful teaching. This provides some explanation as to why states employ so many kinds of teacher tests, including tests of basic skills and general knowledge as well as pedagogical and/or subject knowledge and observations of performance.

The popular response toward teacher testing, then, reflects the low public image of teaching and growing dissatisfaction with the teacher education institutions and certification process. Few champion teacher testing as a total solution to the problems facing the teaching profession, but supporters do perceive a number of benefits to the profession including symbolic and political payoffs as well as the actual impacts on teacher preparation.

Testing as a symbol. Testing is symbolically useful. In a tangible way, it demonstrates that the state is attending to the problem of low teacher quality. Some argue that the existence of testing will upgrade the status of teaching in the public eye and, as a result, teaching will become a more attractive profession to prospective entrants. In this view, it is not so much what the test measures as its very existence which, it is argued, will enhance teaching as it does other professions, such as medicine, law, and accounting.

Testing as a political act. The political aspects of testing are more complex in motivation and impact. The growing number of state education departments and legislatures adopting testing policies attests the substantial political appeal of this approach. Whatever the tests measure, they do, in any event, introduce another kind of state leverage into the "power politics" associated with program review and teacher selection.

In a sense, the use of teacher testing for certification removes substantive control of entry into the teaching profession from members of the profession, schools of education, and school districts alike. Although state officials may confer with teacher representatives or school of education officials to set cutoff scores, the test developer determines the knowledge expected of teacher candidates. The assumptions used in the test-making process about educational theory, practice, and the relation between theory and practice become standards for entry. These standards are not directly set by practitioners, and may or may not be consistent with the standards set through program approval and certification processes. Moreover, to the extent that school districts are proscribed from hiring uncertified teachers and to the extent that the tests affect supply, testing limits local influence over hiring and entry.

While testing provides opportunities for some fundamental shifts in the politics of controlling the teaching profession, at the same time implementation of testing entails few political costs and several advantages, including the symbolic advantage of appearing to act on a perceived crisis.

1. Implementation of a testing policy costs relatively little. Even states choosing to develop their own tests sustain only a one-time expenditure. The teacher candidates' test fees underwrite the minor ongoing c ts of test administration. This allows state leaders to boast that they have improved education without infusing substantial capital in teacher education.
2. Pencil and paper tests provide objective, clear-cut measurements, thus removing discretionary decisions from both the state bureaucracy and the education establishment. Unlike the standards involved in accreditation and program approval, which may be vague and cumbersome, testing yields scores which are easy to explain and apply.

3. Testing policies can be characterized as unintrusive. The state can claim that it is not prescribing the behavior of schools of education, school districts, or teacher candidates. More direct regulatory moves might be resisted on the grounds of institutional autonomy, local control, or academic freedom.
4. The requirement has face validity and surface plausibility. Few will object to teachers being required to demonstrate what they are expected to know. Even if the tests' content cannot be linked to effective teaching, the idea that such knowledge is "necessary if not sufficient" is very persuasive.
5. The requirements have been court-tested. In the past, state testing policies were often declared discriminatory and, therefore, unconstitutional. A series of court guidelines made testing acceptable if scores had a rational, nondiscriminatory basis, even though the results might demonstrate a differential impact on different groups (Smith, 1984, 26-31).

While the implementation of testing policies contains small political costs and many advantages, participants and observers postulate two contradictory political consequences of testing for certification. Proponents argue testing provides an accountability measure ensuring competency which in turn politically justifies enactment of the higher teacher salaries needed to attract better qualified candidates. For example, in 1983 the of Arkansas enacted an education reform package which incorporated teacher testing in exchange for tax and salary increases (Education USA, 1983, p. 97). On the other hand, by controlling the supply of the teaching force through testing, most states have affected the composition of the teaching force and in many instances exacerbated teacher shortages in at least some fields. Ironically, combining this further screening with the already declining teacher education enrollments may actually force state leaders to enact a compensatory policy increasing teacher supply at the cost of improving teacher quality through testing. For example, to assuage current shortages, many states are considering alternate certification routes for those with no degree in education.

Testing as an instrument of professional reform. Finally, the concept and goals of teacher testing can be reviewed in terms of its projected impact on teaching preparation and entry. First, testing screens out certain candidates from the profession. In this sense, testing becomes a tool which does not so much select higher quality candidates as set some minimum acceptability. Supporters of this testing concept point out that candidates who cannot pass the minimum requirements should not be teaching under any circumstances.

Second, many may argue testing triggers wider reform of teacher education, encouraging changes in the admissions, grading, retention, and preparation practices of schools of education. In fact several states, such as Florida, Georgia, and Alabama, have been more forceful in this encouragement by making continued approval of a school's program contingent on the percentage of the school's graduates passing the statewide test.

Whether testing ultimately leads to improved teacher quality is an important question. There are two schools of thought about major influences on the supply of high-quality teachers. Weaver (1978, 1979) argues that factors within education are most important, that decreased demand for teachers has led to a decline in the quality of supply as schools of education have attempted to maintain enrollments by lowering their standards. This line of reasoning leads one to expect improvement if competency tests raise standards in schools of education.

Schlechty and Vance (1981) also note the recent decline in the number of academically able teaching candidates, but they argue that expansion of employment opportunities in other segments of the economy has had the most devastating effect on the quality of supply. Their research questions the utility of two major assumptions and underlying efforts to upgrade entrance and exit standards: (1) that teaching is sufficiently attractive to academically able individuals to assure an adequate supply of teachers; and (2) that academically able persons attracted to teaching will remain in their profession. Their findings refuting these assumptions lead them to conclude that, absent other changes in the relative attractiveness of teaching, the main result of higher standards will be a shortage of teachers. Cronin (1981) argues

similarly that upgrading entry and exit standards may screen out some candidates without ensuring that more able persons will choose the profession over other more lucrative fields marked by less "bureaucratic harassment."

NATIONAL EXPERIENCE WITH TEACHER TESTING

The attractiveness of testing as a symbolic requirement and political policy as well as a possible change agent for reforming professional preparation and entry, has resulted in its widespread adoption throughout the United States. Yet despite widespread use, policymakers are just beginning to assess its impact.

Although teacher testing policies in some states data back several decades, the current trend toward teacher testing began in the southeast during the latter part of the 1970s, spreading to the rest of the south and then north at a rapid rate. While only three southern states mandated such requirements from 1975-1978, they were joined by 19 more states over the next four years. Since then, virtually every state has considered enacting some kind of teacher testing policy (Sandefur, 1984).

One of the most recent, comprehensive surveys of individual state activity and national trends in changing certification and education policies was conducted under the auspices of the Educational Testing Service, marketer of the National Teacher Examinations (Goertz, 1984). The survey indicates the following:

- States were extraordinarily active in changing their policies. From 1980-1984, 32 changed teacher certification requirements, 28 changed teacher education curricula, 20 changed policies affecting entrance into and 15 affecting exit out of teacher education, and 9 made changes impacting on staff development (p. 20).
- Requirements for 1983-1984 certification included testing for basic skills in 14 states, general knowledge in 9, professional knowledge in 12, and/or specialty area knowledge in 14 states (p. ii/9).

- During the same school year, states continued or planned to actively supervise schools of education. All 50 states approved the program content, 17 required a basic skills entrance test, 13 a minimum GPA, and 10 both test and minimum average. Thirty eight states enforced minimum course hours. Exit from the education program was dependent on a minimum GPA in 20 states and/or skills test in 5, professional knowledge exam in 3 or a test of subject matter in 1, and competency-based assessment of teaching skills in 6 states (p. 9).
- In the 50-state survey, few linked certification policies to teacher supply in part because few indicated they had collected relevant data (p. 20).

More detailed case studies of four states aided in the interpretation of the data. The authors concluded that a number of elements typically involved in teacher certification were not well coordinated. For example, states sometimes held teacher education programs accountable for students' performance on basic skills and subject specialty tests. States often justified tests on the premise that they would help uncover needed areas of remediation but gave little or no financial support for that remediation (p. 22).

In addition, these case studies indicated the extent to which the required tests screened-out applicants depended on the type and timing of the test, the timing of college, and racial/ethnic group. Early screening and basic skills or knowledge tests accounted for the largest percentage and number of test failures. Students in college programs with selective admissions policies tended to have higher pass rates than those in open admissions programs. Finally, minorities had disproportionately lower pass rates than whites in the three states keeping relevant data (p. 23).

Our own case studies underscore the importance of these screening trends which have changed the pool of incoming teachers, a circumstance which has long-term political and professional implications.

II. TEACHER TESTING POLICIES IN FIVE STATES

The main effort of this study has been to analyze the experiences of five states which require some form of testing for certification. Five southern states were selected because the current trend began there, with such influential organizations as the Southern Regional Education Board (SREB) providing early advocacy. (All 14 SREB member states have adopted some form of teacher testing.) Three of the states examined were in the vanguard of the movement. Georgia mandated its program in 1975, Louisiana in 1977, and Florida in 1978. The current requirements of North Carolina and South Carolina date back to 1979, but both states had previously employed a testing requirement as far back as 1960. Because these states sponsored some of the earliest testing programs, more information is available concerning the effects of their policies. In addition, the variety of approaches used by these states provide a fair survey of the tests employed nationwide.

Information concerning each state's experiences was compiled through field visits and telephone interviews as well as through a review of available documentation. Interviewees included 20 state officials from education departments or regents boards, and five from the state legislature and a governor's staff. On the local level, discussions were held with administrators from eight school districts. The largest number of interviews were conducted in universities and colleges, including 28 deans of education, six associate deans or school administrators, four department heads, and six faculty members. These included a 1984 telephone survey of 25 public schools of education. By selecting schools with the largest number of education graduates, we were able to gather information on the impacts of testing on a significant proportion of each state's enrollees.[1] Interviews also were held with ten representatives of private organizations such as teachers,

[1]During the 1978-79 academic year, when current testing began, these 25 schools of education accounted for 43% of Florida's bachelors graduates in education, as well as 40% of the Georgia, 35% of the Louisiana, 42% of the North Carolina, and 22% of the South Carolina graduates (Office for Civil Rights, 1981).

business and related associations. Documentation came from public and private sources, including some access to unpublished memoranda and statistics, as well as the publicly available legislation, press releases, articles, and reports.

THE DECISION TO REQUIRE TEACHER TESTING FOR CERTIFICATION

A number of circumstances contributed to the revision of teacher certification in these states. First, the specific issue of teacher competency was raised in the context of overall education reform. In all five states the decade of the 1970s marked growing concern about the adequacy of public school education. State-sponsored commissions and task forces studied the problem and recommended reforms. States considered adopting more rigorous high school graduation curricula requirements as well as lengthening the school day and/or year.

An important element of this retrenchment of the school system was the extensive use of tests and testing as not only yardsticks of relative improvement or decline but also seals of approval. If a high school diploma does not indicate whether Johnny can read, passage of a basic skills test does. Both South Carolina's and Florida's assessment policies for students preceded current testing policies for teachers. Florida's Accountability Act of 1976 resulted in the 1978 requirement that public school students take basic skills tests in third, fifth, and eighth grade, and both a basic skills and functional literacy test in eleventh grade.

Proponents of teacher testing presented similar arguments. In the influential 1973 report, *A Plan for Moving Competency-Based Preparation Certification in Georgia by 1978*, the task force concluded that teacher education did not prepare a student to fully demonstrate competence and that the development of measures of graduates' achievments would mean that state certification would no longer depend on education institutions evaluating their own products. Thus, five years later when 20% of the graduates failed the first administration of Georgia's Teacher Certification Test (TCT), the program administrator declared, "We prevented 800 teachers from walking through the door to teach children without knowing the subject matter." ("State Activity," 1980, p. 99.)

A second characteristic of almost all of the states we examined was that much of the impetus for change came from the political arena or in response to political pressure. For example, in three states--Louisiana, Florida, and South Carolina--the changes in certification were the products of legislative actions. In Georgia, State Board and Department of Education officials formulated a testing policy at a time when the state legislature threatened to impose one on them.

Louisiana, a state which elects much of its education leadership, provides a good example of the politicization of this issue. In 1976, a new Superintendent of Education, elected on a platform of education reform, immediately began studying ways to implement teacher testing. The issue also had strong backing from an influential lobbying group of state businessmen who linked improved education with the state's future economic growth. The state legislature finally passed a testing requirement in special session after the governor agreed to drop his veto in exchange for legislative approval of a $1,500 teacher's salary increase (Ducote, 1982, pp. 2-3).

Finally, lawsuits against two states laid out the guidelines for the use of testing in certification, thereby encouraging its adoption by other states. The U.S. Department of Justice filed discrimination suits against both North Carolina and South Carolina for their use of the National Teacher Examinations (NTE) in both certifying teachers and determining pay levels.[2] South Carolina began using the NTE in 1945, setting minimum passing scores for certification in 1957. North Carolina first required the test in 1960, applying minimum scores to certification in 1964. Because both states arbitrarily set passing

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[2]The core of many of the court suits was the manner in which these states used the tests to maintain a segregated education system. In a 1971 suit filed against a South Carolina school system, *United States versus Chesterfield County School District*, at issue was the firing of ten veteran black teachers during the integration of the two local segregated school systems. The ten were let go because they had not achieved higher scores on the NTE. While the district court initially upheld the action, the Circuit Court of Appeals overruled the decision on the grounds that "the retention criteria had not been equitibly applied to both those who were retained in employment and those dismissed" (National Teachers Examinations Policy Council, 1979).

scores which had disproportionately adverse employment and salary outcomes for minorities, the manner in which the test was employed was potentially unconstitutional. In 1974, the Educational Testing Service (ETS) announced it would cease reporting NTE scores to South Carolina due to improper test usage. The action stemmed from South Carolina's failure to comply with 1971 guidelines issued by ETS stressing the necessity to validate NTE cut-off scores used to certify teachers. A 1975 court ruling resulted in the discontinuation of the NTE as a certification requirement in North Carolina. Only after both states contracted with the ETS for a validation study of the NTE was the legal basis for testing established. In a 1977 landmark case, the U.S. Federal Court upheld South Carolina's use of the NTE after that state's application of a validation study to the setting of passing scores was declared nondiscriminatory. The suits against these two states paved the way for the greater use of testing to certify teachers by specifying that a test is not discriminatory if it has a differential impact on different groups. It is only discriminatory if the purpose of the state was to use the test with discriminatory intent (Smith, 1984, pp. 26-31).[3]

Major educator groups did oppose the method but not the intent of teacher testing policies. Teacher associations, for example, lobbied against the proposed tests on several grounds. First, they argued, written tests cannot predict teacher effectiveness. Moreover, failure of a single test should not be the sole circumstance denying candidates'

[3]The recent 1984 outcome of a case filed against the state of Florida on the basis that passage of a required competency test for a high school diploma was discriminatory continued this trend. The case established that statistical evidence that minority students had higher fail rates was not sufficient to prove discrimination. Moreover, the state surveyed students to prove the skills measured in the test had been taught, establishing the concept of validation by opinion as legal proof of nondiscriminatory intent. Although such cases indicate then that the use of testing will continue to receive court approval (Smith, 1984, pp. 31-35), it is an issue which will continue to be contested. For example, in August 1985, a federal judge temporarily enjoined the state of Texas from requiring a preprofessional skills entry test into state-approved teacher training programs. The judge held that extremely high fail rates of minority test takers provided evidence that the test's intent may have been to lower the number of minority students admitted.

entry to the profession. Finally, these groups argued that the profession itself should control entry and professional standards. These organizations perceived that whoever determined the test would also determine the curriculum for teacher preparation and entry into the field (Louisiana Association of Educators, 1978, pp. 2-3). The Florida Teacher Profession-National Education Association (FTP-NEA) found that state's proposed revisions of the criteria defining certification standards did not provide for "true teacher involvement," leading the organization to propose the creation of "a State Standards and Licensure Commission comprised of practitioners in the profession" (Thomas, 1977, pp. 1-3).

Despite this opposition within the profession, all five states did mandate teacher testing policies. Basically, they required testing at three key points during teacher preparation and initiation: admission into a teacher education program, exit from that program into the teaching profession, and first years of on-the-job experience. The admissions and exit tests are all pencil-and-paper examinations, covering a wide range of topics, including basic skills as well as general, pedagogical, and field of specialty knowledge. The on-the-job performance tests are observation assessments. Their inclusion as certification requirements has in essence made full certification a two-stage approval process.

All five states now require graduates from approved teacher education programs also to pass a written entry examination for at least initial certification. Employment of the other tests varies. Charts 1 through 5 present the policies mandated and testing programs implemented by the individual states.

INSERT CHARTS HERE ??????? charts 1 through 5
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Guidelines for the establishment of these testing policies varied in specificity and strategy. A discussion concerning how the states converted these policies into the current testing requirements follows.

Chart 1

FLORIDA

Mandated By: Florida Statute 231.17 (1978) and
Subsequent Legislation (1979, 1981)

Policy	Tests
Entrance to school of education requires passing score on a nationally normed college entrance test.	Candidates must achieve 835 on the SAT or 17 on the ACT. Schools may waiver the requirement for ten percent of their students.
Applicants for initial certification must pass a comprehensive written exam measuring mastery of minimum essential generic specialization competencies--including writing, listening comprehension, reading, math, and pedagogical knowledge.	The state-developed **Florida Teacher Certification Examination (FTCE)** tests both basic skills and pedagogical knowledge. Candidates for certification must pass each of four subtests: writing, reading, mathematics and professional education. (July 1980)
Complete a year-long beginning teacher program.	Most local school districts use the **Florida Teacher Performance Measurement System (PMS)**, developed by a coalition of state educators, to fulfill observation aspects of the "professional development plan" for each beginning teacher. Observation teams (school administrator, peer teacher, and another professional) must complete three formative and two summative evaluations, and use the assessment as part of their recommendation for certification/noncertification at the end of the first year. (1982-83)

Chart 2

GEORGIA

Mandated by: Georgia State Board of Education (1975)

Policy	Tests
Applicants for initial Georgia Teaching Certificate must attain a passing score on an appropriate criterion-referenced test.	The state developed 28 **Teacher Certification Tests (TCTs)** which reflect the instructional content in various teaching fields of the state's public school system. (September 1978)
Initial teaching certificates, may be converted to a renewable professional certificate upon satisfactory demonstration of on-the-job performance as measured by the approved performance assessment instruments.	Using the state-developed **Teacher Performance Assessment Instruments (TPAI)**, three state data collectors (regional representative, administator, and teacher) observe beginning teachers; once in the fall and in the spring. The candidate has three years under the nonrenewable initial certificate to fulfill this requirement. (May 1980)

Chart 3

LOUISIANA

Mandated by: State Legislature - R.S.17:7(6) (1977)
and Subsequent Legislation (1984)

Policy	Tests
Entrance to school of education requires passage of a standard test.	Student must pass the **National Teacher's Examination (NTE)** Core Battery I & II. Developed by the Educational Testing Service, these tests address communications skills and general knowledge. (1985)
Applicant for certification must pass an examination that includes English proficiency, pedagogical knowledge, and area of specialization knowledge	The state requires passage of the **NTE Area Examinations** in the candidates' teaching field (September 1978) and the **NTE Core Battery Tests**, replacing the **NTE Common Examinations** in 1983. In-state candidates take only the Core Battery III test of pedagogical knowledge since the implementation of the above entrance requirement.

Chart 4

NORTH CAROLINA

Mandated by: Joint Resolution of the State Board of Education and Board of Governors (1978)

Policy	Tests
Development of screening procedures before admittance to teacher preparation progams.	Students must pass the **National Teachers Examinations (NTE) Core Battery I & II.** Developed by the Educational Testing Service, these tests address communications skills and general knowledge. (Fall 1984)
Development of a test as a prerequisite for initial certification.	The state continued to require passage of the **NTE Area Examinations** in the candidate's teaching field. In addition candidates must take the **NTE Core Battery III** test of pedagogical knowledge. (February 1984)
Development of an evaluation system for use with all individuals prior to the award of continuing certification. (1985-86)	North Carolina school districts must base observation instruments used to review a beginning teacher's performance on the criteria established by the state's **Teacher Effectiveness Evaluation (TEE) Project.** (1985-86)

Chart 5

SOUTH CAROLINA

Mandated by: South Carolina Educator Improvement Act 187 (1979)

Policy	Tests
Administration of a basic skills exam in reading, mathematics, and writing to applicants for admission to teacher education programs.	School of education applicants have three opportunities to pass each of the three basic skills tests comprising the state-developed **Education Entrance Examination (EEE).** (July 1983)
Development or selection of teaching area exams for those areas in which NTE area exams are not available for certification.	The state developed 14 **South Carolina Teaching Area Examinations (SCTAE)** in teaching fields where no appropriate NTE area examination existed. (July 1982)
Development of an observational instrument to be used by local districts in evaluating teachers during a two-year probationary contract.	Using the state-developed **Assessments of Performance in Teaching (APT)**, three observers (principal, teacher, and district administrator) evaluate three lessons in the fall, as well as in the spring if unsatisfactory. Results are used to determine whether a probationary teacher is awarded an annual contract. Although an employment decision, failure to pass the assessment within two years, means the candidate has automatically failed to qualify for the five-year renewal of initial certification. (1983-1984)

IMPLEMENTATION OF STATE POLICIES

The five states employed a variety of approaches in policy implementation. In three states--Georgia, Louisiana, and North Carolina--the state's established education leadership took on the responsibility. Thus, each state's education board, superintendent, and department oversaw the development, validation, and establishment of that state's tests.

In the case of South Carolina, the legislature delegated most of the responsibility to a temporary state agency established for the purpose, the Educator Improvement Test Force. Composed of members appointed by the governor, legislature and superintendent of education, the task force automatically dissolved in 1982 with much of the testing guidelines and apparatus in place. Responsibility for completing the task transferred to the Superintendent of Education.

Finally, multigovernment participation characterized the implementation of Florida's testing policies. For example, the Council on Teacher Education (COTE) identified the competencies required, a list which was passed on and added to by the state legislature and subsequently incorporated in State Board of Education rules.

Development of Pencil-and-Paper Tests: Policies in all the states required written tests for entrance into teacher education programs and/or attainment of initial entry into the teaching profession. All five states either adopted existing tests for the purpose or developed their own tests.

Of the five states examined, Louisiana, North Carolina, and South Carolina use the National Teacher Examinations (NTE), a nationally normed test developed by the Educational Testing Service (ETS). There are two kinds of National Teacher Examinations. Area exams deal with the test-taker's understanding of content and methods applicable to separate subject areas. All three states use these as written certification tests.

The other NTE exam covers professional knowledge and general educational skills such as English and math. When Louisiana and North Carolina originally used this test for certification, it was known as the NTE Common Examination, a single three-and-a-quarter hour exam

consisting of six tests for professional education, written English expression, social studies, literature and fine arts, science, and math. In 1982, ETS revised the Common Examinations into the NTE Core Battery Tests. Made up of three two-hour modules, Core Battery I entitled Communication Skills consists of separate tests of reading, listening, and writing. Core Battery II on General Knowledge covers science, mathematics, social studies, literature and fine arts. The third module deals with professional knowledge.

Characteristics of the revised examination have made it possible for the states to diversify their employment of the NTE. While ETS provided states with a single, weighted score for individuals taking the Commons examination, the Service reports scores on each module of the core tests separately. This has allowed some states to reassign test requirements. Thus Louisiana and North Carolina use the first two NTE Core Battery tests to screen admissions to schools of education while retaining the NTE Core Battery III as an exit test for certification.

Three of the states opted to develop their own pencil-and-paper tests. The Florida Teacher Certification Examination (FTCE) tests for both basic skills and pedagogical knowledge. Georgia's Teacher Certification Tests (TCT) covers the instructional content in specific teaching fields. Finally, South Carolina's Education Entrance Examination (EEE) tests school of education candidates for basic skills while the South Carolina Teaching Area Examinations (SCTAE) test certification candidates in teaching fields where no appropriate NTE area exam exists.

National versus Locally Developed Pencil-and-Paper Tests: Participants and observers of these state programs perceive a number of advantages and disadvantages to either using the NTE or developing their own test. For the most part these revolve around several issues.

A key issue concerns whether a national test like the NTE reflects local state goals and standards. Proponents of the NTE stress its national base, pointing out it is the most widely used test of its kind and that many of the state's students take the exam in any event for hiring purposes. However, it is precisely this national outlook which appears to motivate states to develop their own tests. For example, some states found the NTE inappropriate to their needs. When Florida

state law required candidates pass a written test which included coverage of 22 specific competencies, state officials decided they would have to develop their own test to fit the bill. In a similar vein, many perceived the NTE as too removed from the state schools' education curriculum. Moreover, according to one state official, decisionmakers thought it was better to develop their own tests, "so the profession feels ownership."

One element of this debate concerns the fact that the NTE is norm-referenced, while all the state-developed tests are criterion-referenced. In the NTE, then, scores are scaled nationally, based on how many correct answers individuals gave relative to each other. The criterion-referenced state tests have fixed scores based on absolute rather than relative knowledge.[4]

But while states developing their own tests perceive advantages in tailoring tests to their own needs, critics argue that state-developed tests can become too parochial. In Georgia, for example, a number of deans raised this issue in relation to the state's history TCT, which they found stressed too much Georgia state history at the expense of national and world developments.

The cost, time, and risks associated with developing a test are also key issues associated with test choice. In North Carolina these were cited as the reason the state continued to use the NTE despite policymakers' preference to construct their own exam. Georgia, for example, spent approximately $30,000 to develop each of the 28 teaching area TCTs (National Governors' Association, 1980, p. 126). The costs of South Carolina's EEE exceeded predictions as the initial testing of the exam cost the state approximately $134 per examinee (South Carolina Department of Education, 1983, p. 3). In addition, states which developed their own tests generally took longer to implement their programs than those who used the NTE.

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[4]The fact that South Carolina employs two different measurements by using norm-referenced NTE area exams for some certification applicants and its own criterion-referenced South Carolina Area Teaching Exams for others, may raise legal and equity issues.

Moreover, the experience of South Carolina suggests the problems state test developers can have when there are few potential users. The South Carolina decision to develop fourteen area examinations in the absence of any appropriate NTE area exam reflected a desire to provide equity among teacher candidates in the certification process. However, the small number of candidates requiring these tests also reflected the limited resources available for developing a reliable exam. Test developers had problems constructing area exams for Speech and Drama, Speech-Language Pathology, Health, or Orthopedically Handicapped. These fields were so small, it proved difficult to recruit the necessary breadth of in-state expertise to judge content validity or to find a sufficient number of examinees to field test the exam. All of this drove up the cost of test development relative to more widely used area examinations and led some to suggest it would be more practical if several states pooled their resources to develop such tests (Jordan, 1984, p. 6).

However, the most important drawbacks concern the difficulty in satisfactorily developing a test. Membership selections for the committees and panels working on the examination must be politically balanced and legally acceptable. Perhaps most important, design considerations are crucial to determining whether the test achieves its purpose (Mappus, 1984, pp. 11-13).

In this light, it is interesting to note that almost all the pencil-and-paper exams developed by these states were revised subsequent to their original development or implementation. Pass rates of over 93% in South Carolina's Education Entrance Examination precipitated a conceptual review and revision of the test in 1984. After intensive review, test developers decided that eight of South Carolina's fourteen area tests would have to be redeveloped due to questionable items and inadequate content coverage (Jordan, 1984, p. 5). In Florida, the pedagogical section of the FTCE was criticized for lacking rigor and a theoretical framework. Policymakers decided to rework the FTCE so that it is research-based rather than consensus-based.

This is not to say that ETS has not also made changes in the NTE. The replacement of the Common Examination with the Core Battery modules necessitated each state's revalidating the exam to set appropriate cutoff scores.

A study by the Southern Regional Education Board (SREB) addressed the question of what a state gains by creating its own test by comparing Georgia's TCT with the NTE. They found that when the two tests were controlled for subject area tested, the commonality of the tests ranged from 40% to 69%. In addition, researchers discovered that applying the test to a given set of candidates and using comparable cutoff scores so the same number of candidates pass the exam, resulted in agreement on the particular individuals who pass or fail. Agreement between the various tests used ranged from 82% to 97%. SREB concluded that the differences in the two tests did not justify the additional cost of developing the TCT (SREB, 1982).

Pencil-and-Paper Test Validation: All five states conducted validation studies whether they developed their own test or used the NTE. The importance of test validation stems politically from the fact that such a procedure is necessary as a legal basis for setting passing scores and technically from the fact that such a procedure should reveal what the test measures.

All three states validated the NTE using the jury judgment approach developed by ETS, hiring ETS to either conduct the study or act as consultant.[5] Panels of relevant educators--i.e., teacher educators, classroom teachers and school administrators--assessed the appropriateness of the test content in terms of school of education curriculums and classroom job requirements. Similar panels determined what proportion of the minimally knowledgeable candidates would be able to answer the questions, judgments used in the determination of appropriate scores.

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[5]One criticism of the NTE is that ETS--the marketer of the NTE--often validates its own test. See, for example, Louisiana Association of Educators, 1978, p. 2.

Despite extensive validation procedures, educators believe that the NTE cannot measure effectived teaching ability. Several deans interviewed had examples of honor students who achieved high scores on the NTE but could not handle a classroom during student teaching. The general consensus among those interviewed was that the NTE is a test of general education which provides some additional confidence in teaching candidates without actually measuring teaching ability. (As one dean put it, "it [NTE] plugs in another plus.") The NTE Policy Council, set up by ETS to establish policies concerning the use of the exam, explicitly advises that the NTE measures only one aspect of a prospective teacher's preparedness, academic knowledge. "The information is limited because the knowledge and skills tested do not include many elements important to professional performance" (ETS, 1984, p. 143).

Pencil-and-paper tests developed by three of the states are subject to similar qualification. These states contracted out development of the test to either a testing firm or the state university faculty. All used panels or surveys of teachers, school of education faculty, and school administrators to review the content and relative importance of test items as well as to recommend what the minimally qualified candidate should know. All three then field tested their examinations. There was some criticism of this approach. One Georgia dean argued that random selection of various teaching area panels did not allow for the possibility of out-of-field teaching, suggesting that validation should be done by the best and brightest.

Assessments among educators concerning what these tests measure are somewhat similar to those on the NTE, in fact for all written tests. Most deans felt that the tests covered knowledge but not teaching ability. Concerning the FTCE, the Florida Department of Education makes "no claim that the test scores will have predictive validity--i.e., be able to predict the success of a prospective teacher in an actual classroom situation following passing the examination" (Holihan, p. 17).

Development of Performance Assessment Instruments: Unlike the pencil-and-paper tests, there are no national tests of performance. The four states requiring a performance assessment for their beginning

teachers have had to develop the basis and observation instruments themselves. Georgia and South Carolina require the use of specific state- developed assessment instruments while Florida and North Carolina allow local school systems to choose or develop their own instruments as long as they comply with state guidelines. Thus, beginning teachers in Georgia are evaluated using the Teacher Performance Assessment Instruments (TPAI), while in South Carolina both student and beginning teachers must be observed using the Assessments of Performance in Teaching (APT). All the Florida school systems except Dade County use the Florida Teacher Performance Measurement System (PMS) developed by a coalition of state educators, while North Carolina school districts must base teacher performance observations on the criteria established by the state's Teacher Effectiveness Evaluation (TEE) project.

These states, especially Georgia, have been some of the first states in the country to develop this approach. Performance observations have been popular in that they answer some criticisms of the pencil-and-paper tests, i.e., they show actual behavior in the classroom. In addition to adding a new dimension to the certification process, some state officials and other supporters view such policies as useful tools for staff development. For example, Georgia schools have had a problem retaining beginning teachers, two-thirds of whom leave their job within the first three years. The TPAI requirement was designed to promote on-the-job training and assistance to those teachers.

The implementation of performance testing was much more complex than for the written tests. Not only did states venture into uncharted territory, but unlike the written test, implementation was not completed once the exam was validated and field tested. Utilization of the test depended on the establishment of training programs for observers, as well as recruitment of participants from various elements of the education system which previously had little to do with each other. It is not surprising then that it took the states longer to implement this element of their program. In fact, of the state programs we reviewed, only Georgia had a system in operation long enough to attain meaningful results.

Most of the states developed their instruments on the basis of a literature review concerning teacher functions, effective behavior, and practices. An exception was the APT which measures skills derived from a statewide survey of educators. At some point panels or surveys of state educators reviewed the instruments which were field tested.

What Do the Observations Measure? As in the case of written tests, both educators and the developers of these assessments warn against overstating the quality of teaching measured by such instruments. They raise similar concerns about the showcase nature of the observation instrument, the dependence on raters, the limited applicability of the research literature, and the tendency of such teacher testing approaches to segment behavior from knowledge.

First, such an approach often promotes a showcase atmosphere and there is no guarantee that the teacher routinely performs at that level. For example, one teacher recalled preparing for a TPAI observation "at least three months in advance, much longer than I could ever do in a normal situation." As a result, this beginning teacher said, "I was afraid I was neglecting the other kids" not included in the assessment unit. (Scherer, 1983, p. 59)

Similarly, many educators worry about a system so dependent on the raters for objectivity and consistency. Many had stories of particular raters penalizing teachers for not performing as the rater would. One dean noted that a rater was notorious for taking off points if a teacher did not use the blackboard in a certain manner.

Third, there is some concern about the theoretical basis of such instruments. For example, the developers of North Carolina's TEE offered a caveat concerning that instrument's research base. The most usable research on effective teaching pertained to elementary and junior high levels in the core subjects. The developers concluded that "these gaps in the current body of research on effective teaching serve to limit somewhat the inclusiveness and generalizability of the functions, practices, and indicators developed for the Rating Scale...." (Group for the Study of Effective Teaching, 1983, p. 5). However, they argued that the research base is strong enough to justify the instrument's use.

Finally, and perhaps most importantly, a number of deans commented on the tendency of the performance assessment to divorce teaching techniques from subject content. As one Georgia dean commenting on the TPAI put it, such observations tend to separate teaching from learning. A South Carolina dean recounted a situation in which only one of three observers using the APT penalized a beginning teacher for reversing a math construct because the teaching methodology had been correct.

Again, the developers of these instruments warn of their limitations. Researchers connected with the TPAI and the TEE caution that proficiency in the competencies measured does not guarantee an effective teacher (Capie, 1979, p. 9; Group for the Study of Effective Teaching, 1983, p. 6).

IMPACT OF SCREENING EXAMINATIONS

An increasingly integral aspect of teacher testing policies toward certification has been the extensive use of screening requirements for entry into a preservice teacher education program. Four states we examined mandated admissions tests and scores for most education programs.

State	Admissions Test
Florida	SAT or ACT
Louisiana	ACT
	NTE Core Battery I, II (beginning 1985)
North Carolina	NTE Core Battery I, II
South Carolina	EEE

These requirements have not been static and some have been the consequence of certification tests rather than part of the original testing policy. In Louisiana, the Board of Regents established the American College Test (ACT) requirement after students in the public universities did poorly on the NTE certification test. The state legislature and Council of Deans changed the screening test to the two NTE battery tests in 1984. South Carolina's Board of Education approved a policy to revise the EEE and raise passing scores.

In our survey, 16 of the 25 schools had changed their admissions standards, although not always in response to state policies. In some instances, individual schools of education imposed their own or another national test as a screening device for admission. Several deans reported using the Scholastic Aptitude Test (SAT) or California Achievement Tests as well as their own basic skills measures as additional screening requirements.

How certification testing encourages admissions tests: States and individual schools adopt screening tests for a number of reasons. First, some argue that it does away with the "wasteful and unethical"

practice of admitting students into teacher education programs and then denying them certification at the end of their academic program because they cannot pass basic skills tests (Soar, 1983, pp. 239-246).

A second, more compelling catalyst, has been the tendency of states to link pass rates on written certification tests to program approval. Reacting to the low pass rate of some schools' graduates on the FTCE and TCT, Florida requires an 80% pass rate, and Georgia a 70% cumulative five-year pass rate for program approval. North Carolina requests schools to report graduates' scores as part of the state's program review process. Several educators interviewed in Louisiana and South Carolina feel similar requirements are inevitable. The gravity of the situation for some schools is illustrated by the fact that in 1983, Georgia placed 39 programs in 12 public colleges on probation and Florida disapproved 38 programs in 18 institutions for failing to meet pass rate requirements. Moreover, school administrators fear the publicity attendant high failure rates also contributes to declining applications and enrollment.

Schools gain some protection from these threats by employing admissions or entry tests which in turn predict if students will pass the written exit or certification tests. One element of North Carolina's program is to gather indicators of each student's potential to pass the certification test *before* entering a teacher education program. Based on a study correlating SAT and NTE performances of over 3000 North Carolina graduates, the state's Department of Public Instruction published a table which indicates a student's chance of passing the NTE based on SAT scores (Liaison Committee, 1981, pp. 6, 7, 10). Research on Louisiana students taking the NTE indicated a significant correlation between student performance on the ACT and NTE, and that the test was the best predictor of a number of variables, including GPA, of how well sophomores would eventually do on the NTE (Ducote, p. 9; Tarver, 1982, p. 105). One Louisiana dean noted that prior to the use of the ACT as an admissions test, approximately 25% of his school's graduates failed the NTE. Since the imposition of that admissions test and a minimum GPA, the failure rate decreased to the 5-15% range.

Such screening also provides benefits when certification tests hold schools of education accountable for subject matter they do not teach--i.e., basic skills and cultural knowledge. In fact, critics of the NTE or Georgia's TCT often cite their liberal arts bias as not reflecting the school of education curriculum. In North Carolina and Louisiana, screening admissions candidates with the NTE Core Battery I and II assures administrators that those entering the school have sufficient skills and general knowledge to pass the certification test, leaving the school accountable only for the third battery test of pedagogical knowledge. South Carolina's EEE serves a similar function, screening for basic skills. In addition, many schools use SAT, ACT, or other test scores as indicators of how well students will do in certification tests stressing the liberal arts.

Finally, states and schools use screening tests as remedial tools. In South Carolina, schools of education receive summary score reports detailing their applicant's performance on the EEE. Policymakers felt this reporting requirement would contribute to the identification of areas in which the schools' examinees exhibit the greatest weaknesses. This information could then be used to focus remedial programs where most needed (Mappus, 1984, pp. 9-11). Several deans reported they use their own college tests or other national tests in a similar fashion.

Impact on schools of education and the teacher supply: Overall, the use of screening examinations has had an adverse impact on enrollment size and teacher supply, whereas the impact on individual schools has varied widely.

School administrators could not assign a number to it, but they generally conceded that the proliferation of testing requirements in general had discouraged some from applying to education programs. In addition to inhibiting those who feared they would not pass a certification test, some deans thought the extra tests, test fees, and Saturday exam periods also discouraged some bright applicants who simply did not want to go through the extra hassle for what might appear to be "Mickey Mouse" requirements.

While this discouragement factor may be hard to measure, the admissions tests themselves have reduced the number of students entering education programs. For example, the 1978 Florida minimum entrance requirement of 835 on the SAT or 17 on the ACT resulted in a 25% decline in overall admissions (Feistritzer, 1983, pp. 94-95). One dean of a Louisiana school of education indicated that the legislated admissions requirement for a 2.2 GPA, combined with the Board of Regents requirement for an ACT score of 16 or better, had cut enrollment by approximately 25%. Beginning in 1985, the NTE Core Battery I and II will be used as an admissions test with a projected fail rate of approximately 25% of the admissions candidates.

The Florida and Louisiana patterns illustrate that the impact of admission screening and subsequent tests varied widely by type of school. For flagship schools, the addition of screening exams had little or no impact because those schools were already highly selective in their admissions policy. This was in great contrast to those schools employing lower admissions thresholds. As illustrated in the above Louisiana example, the shift from the open admissions policies generally practiced in the state university system to one of testing and minimum grade point averages adversely impacted on enrollments in a number of state schools. One Louisiana dean reported that 44% of his school's candidates fail the first administration of an English proficiency test used as an additional admission requirement. Several deans pointed out that their's is the only school in that particular university to require minimum grade point averages and admissions tests.[6]

The most disturbing pattern, however, is the disproportionate impact screening and related program approval policies have had on black applicants and education programs. For example, Florida's admissions requirements resulted in an overall 25% decline in admissions, but a 90% decline in minority admissions (Feistritzer, 1983, pp. 94-95). Estimates of the impact of South Carolina's EEE admissions test

[6]According to one Louisiana dean, admissions screening prevents students from majoring in education who may not intend to apply for state certification, but rather apply for certification in neighboring states having less stringent certification requirements.

predicted a 10% fail rate for white applicants but a 50% fail rate for blacks.

At the same time that black applicants are having trouble meeting state admissions requirements, predominantly black schools are under increased pressure to raise admissions standards even higher. In the two states linking program approval to students' passage of the exit or certification test, most of the programs put on probation were predominantly black. In Georgia, two of the state's largest producers of black teachers, Fort Valley and Albany State Colleges, had most of their programs put on probation in 1983.

The tendency of screening tests to further reduce minority enrollment raises concerns about the future of some education programs in predominantly black schools. A number of interviewees questioned whether this wasn't a goal of state policy. Because education programs are the mainstay of many small, black colleges, the decreasing enrollment may place the existence of such institutions in jeopardy.

One concern raised by many deans was that these policies resulted in excessive screening too early in a student's career, as in the example of Louisiana schools using part of the certification test for admission into an education program. Several pointed out that when screening tests eliminate those unlikely to do well on another test, they have set up a self-selective process that provides no measure of prospective teaching ability. Moreover, such policies might prematurely deny students access to the program, raising the equity issue of providing more opportunity for students to meet the admissions standards. One Louisiana dean's comment reflected concerns of nearly all other deans interviewed in that state: "I hope it doesn't screen out those who have potential but have problems."

Even if applicants pass the entrance test, many schools have instituted additional monitoring requirements throughout the student's career, including maintenance of minimum GPAs. One dean whose school requires passage of a second comprehensive exam as well as a 2.7 GPA to qualify for student teaching, expects that as a result some students will take longer to complete their education programs.

Finally, while there is evidence some schools have provided remedial help to students having difficulty qualifying for admission, there has been no consistent response. In one North Carolina school, the liberal arts colleges are held responsible if students fail to pass the screening examination (NTE Core Battery I and II). However, this is an extreme example. For the most part, remedial programs resulted only when the school administration actively established a program tied to the screening test results. Unless other elements of the university already had relevant remedial programs, this meant recruiting help from outside faculty and setting up programs with little or no funding from the state.

IMPACT OF WRITTEN CERTIFICATION EXAMINATIONS

All five states require passage of a pencil and paper test in order to qualify for certification. While the types of certificates vary and some states have additional requirements, such as a performance assessment, it is impossible to gain a full, professional certificate without first successfully taking these tests.

State	Test	Subject
Florida	FTCE	Basic Skills Pedagogical Knowledge
Georgia	TCT	Teaching Area
Louisiana	NTE Core Battery	Basic Skills General Knowledge Pedagogical Knowledge
	NTE Area Exam	Teaching Area
North Carolina	NTE Core Battery III	Pedagogical Knowledge

	NTE Area Exam	Teaching Area
South Carolina	NTE Area Exam/SCTAE	Teaching Area

Of all the requirements we examined, these written entry tests have had the most immediate and extensive impact throughout the education system, including the schools of education, the teacher supply, and even to some extent, the local school districts.

Impact on Schools of Education. The need to prepare students for certification tests, fulfill increasing state demands that the teaching of specific competencies and course requirements be included in the curriculum, and in some states, maintain program approval through satisfactory pass rates, has had a number of effects on schools of education and, in some instances, the wider university. Again, the impact varied, depending on whether the school's graduates were having difficulty passing the written tests.

On the whole, deans of education were favorable in their reaction to the tests, although reactions varied. No one objected to the idea of testing for certification, and as one dean put it, such testing is important to students' perception of the profession in that it serves as a "rites of passage."

A frequently cited advantage of testing was that it forced review of the curriculum and programs. As one respondent put it, "any time you have to review your program there are benefits." In all the states some deans viewed state testing policies as an opportunity and used the requirement as a lever to make needed changes. One Louisiana school provides an extreme example. A student fail rate of 42% on the NTE precipitated sweeping changes in school administration and faculty as well as a "renovation" or updating of the courses, contributing to an 87% pass rate less than three years later.

Different tests precipitated different kinds of adjustments. Tests of area knowledge or basic skills and general culture often meant administrators had to arrange for changes or help from outside the education program, whereas changes accommodating pedagogical tests could be handled within the school of education. The experience of the

Georgia schools is instructive. Virtually all the deans contacted in that state reported adjustments made to accommodate the TCT, a test of teaching area. All the schools reviewed the test to make sure the curricula covered the material, resulting in some adjustments to course requirements rather than course content. For example, one school added logic and journalism to the curriculum because the TCT for English assumed knowledge in those areas. Another added Georgia State history to middle grades students' requirements. In a state that links program approval to TCT pass rates, many of the schools tracked the test results of their graduates to diagnose any gaps or problems in their program. One dean reported that students were having trouble with the Communications Art TCT. After further investigation revealed the speech component rather than the English component of the test was giving students trouble, adjustments were made in the curriculum.

Deans in other states requiring area examinations reported similar reactions. One Louisiana school increased the math and science hours required for elementary grade students, while a South Carolina dean convinced his university's mathematics department to make changes in its curriculum to accommodate education students having trouble with the math NTE Area Examination.

Some schools of education also made adjustments when students had problems with tests of basic skills and general knowledge. The most typical response was to arrange for remedial help, usually in the form of voluntary seminars and labs. For example, students in a Louisiana school were having trouble with the fine arts section of the NTE Core Battery II so the school offered a two-hour seminar on the topic.

In Florida, education program approval is dependent on graduates passing the FTCE, which includes three tests of basic skills and one of pedagogical knowledge. As a result a number of the schools surveyed provided remedial assistance in the basic skills. For example, one school enlisted the help of the arts and sciences elements of the university to design labs aimed toward speech, reading, writing, and math improvement. In addition, the school provided a developmental program for students admitted under the state's 10% waiver policy. Another Florida school offered review sessions in mathematics. Only one dean in Florida asserted that his school took responsibility only for preparing students to take the pedagogical portion of the FTCE.

In the three states requiring pedagogical tests, a number of schools made changes in the education courses. For example, almost every school contacted in Florida reported integrating research on effective teaching into the education courses.

Changes in the professional education courses reflected not only the need to prepare students for the test but also to comply with accompanying state guidelines for specific teaching area competencies. In both Florida and North Carolina the development of these competencies was an integral part of each state's program. Deans in these states reported they were "overwhelmed" with the consequences these guidelines had on individual programs, resulting in new pedagogical sequences for some teaching areas. Some deans in Florida were exasperated with a legislature which each year kept adding on competencies, leading one dean to speculate that eventually the programs would take students longer than four years to complete. One Florida dean felt the state guidelines had different effects at different teaching levels, and may be "squeezing out" content-based education at the elementary grades level. Overall, this dean perceived the guidelines driving education toward more field-based or competency-based courses.

Similarly, many North Carolina deans complained about the extensiveness and restrictiveness of the teaching area competencies developed under the state's Quality Assurance Program. In terms of education courses, one dean reported that it had resulted in more emphasis on student teaching and clinical experience, while another dean reported his school had added one hour to the method courses for practical experience in the labs. Some North Carolina deans argued that the new competencies could not be accommodated within the theoretical framework of some current programs. Two North Carolina schools had planned to innaugurate new programs which did not conform to designated competencies. Concerned about obtaining program approval, these deans questioned whether the testing was stifling innovation.

In addition to assuring a program that covered required competencies and the tests' content, a number of schools tried to help students improve their test-taking skills. For the most part this involved offering optional seminars which reviewed the tests and taught

test-taking strategies. In two instances, the schools applied more ambitious approaches. One Louisiana school required the faculty to make at least half their examinations essay tests, returning them to the students with spelling and grammar corrected. In a South Carolina school, the faculty was trained to construct standardized test questions in order to increase student exposure and experience with test-taking.

Finally, in states tying program approval to pass rates of graduates, several schools encouraged students to take the examination before graduation. One Georgia school used passage of the TCT as an exit requirement. Similarly, in the 1984-85 academic year, Florida changed its rules and allowed applicants to take the FTCE before completing the certification process, i.e., six months before obtaining a degree from an approved program. As a result, schools of education began encouraging students to take the examination before graduation (Florida State Department of Education, 1985, p. 18).

In assessing the overall impact of these policies, some raised the question as to whether the tests were defining the program. As one North Carolina dean warned, "anytime there is a great deal of emphasis on measurable results, you run the danger of ending up teaching the test." Most respondents did not believe that the testing policies had had this result yet, primarily because most perceived the test cutoff scores as too low, aiming only at the minimally qualified. But there was concern that the tests may be shifting education from theory to a rigid set of behavorial approaches. Worried that testing policies encouraged a "checklist" approach to teacher education, one Florida dean summed up his concern by stating that testing was "changing education from an art into a craft."

One of the most disturbing impacts of the certification tests is that students of predominantly black institutions are having more trouble with the certification tests than their counterparts from predominantly white institutions. In Louisiana, 28.4% of the blacks from predominantly white schools achieved passing grades on the NTE, compared with only 9.8% of those blacks attending predominantly black schools (State of Louisiana Board of Regents, 1983, pp. 3, 7). Studies showed similar trends in Georgia with the TCT (Aldrich, 1983, p. 6) and in North Carolina with the NTE during the mid-1970s (Ayres, 1983).

Several explanations have been offered for this pattern. One suggestion is that it is an "institutional problem." The North Carolina study, for example, found that black and white graduates from predominantly white institutions received higher NTE scores than blacks and whites with similar SATs from predominantly black institutions (Ayres, 1983, pp. 229-300). Others argue that it is not so much the college as the precollegiate preparation that is being measured by the exams and found wanting. There is a self-selection process. Black students who attend schools with high admission standards do well on the test. But many students in the black colleges are from "educationally deprived" backgrounds and that may be the factor showing up in the test scores (Aldrich, 1983, 6). Finally, some argue that an additional factor is that the 1970s opened many opportunities to blacks in more attractive occupations than teaching. As a result, predominantly black schools of education no longer attract the best and brightest. As the dean of one such school complained, his school had neither the scholarship nor the career incentives to compete with more attractive fields.

In one response to this problem, the Southern Regional Education Board (SREB), in conjunction with the ETS, helped a consortium of nine black colleges develop strategies for improving pass rates. ETS provided the consortium with a battery of test questions similar to those used in the NTE which then were integrated into course work examinations and testing programs. In addition, both education and liberal arts faculties received training to develop such questions themselves and design appropriate course work.

Finally, the testing policies directly or indirectly had a variety of fiscal and bureaucratic impacts. For the most part, the states provided little or no funding for the costs associated with curriculum changes and the establishment of remedial programs. The SREB-sponsored consortium of black colleges received grants from the U.S. Department of Education for the purpose. As one dean in the consortium noted, the grants "made the difference," enabling the college to hire faculty and purchase computers and software used in remedial and test-taking programs (Rodman, 1985b, p. 13). However, this was the exception rather than the rule. In Florida, several deans complained that the legislature was too impatient concerning implementation of mandated

programs, setting unrealistic deadlines, but providing no extra resources for the purpose.

Moreover, accountability procedures for graduates taking the test created some problems in Georgia and Florida where schools had to maintain certain pass rates for program approval. In Georgia, candidates taking the TCT sometimes identified themselves with particular schools of education even when they only took one or two courses in that institution. As a result, schools were sometimes held accountable for candidates who had not obtained degrees from their program. In both states, very small programs could be adversely effected if only one person failed the test. As a result, two deans indicated that they would eliminate such programs rather than risk the adverse publicity of program probation.

Impact on the Teacher Supply: Virtually everyone interviewed noted that testing was having an adverse impact on teacher supply. Since the supply was already in decline prior to the testing, it was obvious that with this additional screening, there would be a crisis in the near future. Yet, despite this almost universal foreboding, few states keep and publish all the data relevant to the problem. The following data then are taken from a number of sources in an effort to piece together an overview of the problem.

Table 1 presents an overview of the in-state supply of education graduates before and after states began implementing these testing programs in 1978. In general the experience of these states reflects the national decline in the number of education graduates. Between the 1975-76 and 1978-79 academic years, there were significant declines of one-fifth to one-fourth of the number of graduates in Florida, Georgia, and Louisiana, while North Carolina and South Carolina registered modest declines of less than 10 and 5%. Although the number of minority graduates also declined during this time period, the trend was reversed in Florida where the number increased slightly and in South Carolina where the number increased by over one-half. With the exception of a 3.3% gain in Georgia, the number of graduates continued to decline significantly in the period between 1978-79 and 1982-83. In all the states, the number of minority graduates declined substantially, ranging from one-fourth to over one-half the graduates in 1978-79.

Table 1

NUMBER OF IN-STATE GRADUATES EARNING BACHELOR'S DEGREES IN EDUCATION

Academic Year	Florida		Georgia		Louisiana		North Carolina		South Carolina		United States	
	Total	Minority	Total	Minority	Total	Minority	Total	Minority	Total	Minority	Total	Minority
1975-1976	5178	802	2929	579	3425	1176	4750	1083	2212	402	154,768	18,558
1976-1977	4860	874	2709	545	3057	881	4521	1111	2206	506	143,462	17,573
1978--1979	4122	856	2191	455	2653	825	4285	1036	2107	615	125,786	15,968
1982-1983*	3077	611	2263	304	1867	381	2838	604	1769	364	97,991	10,420
Change												
1975 to 1979												
No.	-1056	+ 54	- 738	- 124	- 772	- 351	- 465	- 47	- 105	+ 213	-28,982	-2590
%	-20.4	+ 6.7	-25.2	-21.4	-22.5	-29.8	- 9.8	- 4.3	- 4.7	+53.0	- 18.7	-14.0
1978 to 1983												
No.	-1045	- 245	+ 72	- 151	- 786	- 444	-1447	- 432	- 338	- 251	-27,795	-5548
%	-25.4	-28.6	+ 3.3	-33.2	-29.6	-53.8	-33.8	-41.7	-16.0	-40.8	- 22.1	-34.7
1975 to 1983												
No.	-2101	- 191	- 666	- 275	-1558	- 795	-1912	- 479	- 443	- 38	-56,777	-8138
%	-40.6	-23.8	-22.7	-47.5	-45.5	-67.6	-40.3	-44.2	-20.0	-9.5	- 36.7	-43.9

Source: Office of Civil Rights, 1978, 1979, 1981.

*Unpublished unedited/partially unedited data, Office for Civil Rights, 1985.

Although this decline in education graduates is a nationwide problem, most of the states we examined are particularly vulnerable because they are dependent to a great extent on out-of-state teachers. In-state schools of education do not graduate enough teachers to fill existing vacancies. In Florida, 64% of the newly certified teachers in 1983-1984 came from out-of-state. (Teacher Supply and Demand in Florida, September 1984, p. 2) In 1983, the percentage of initial teacher certificates issued to out-of-state graduates was 73% in Florida, 61% in Georgia, 43% in South Carolina, and 34% in both Louisiana and North Carolina. (Feistritzer, The Making of a Teacher, 1984, p. 38) North Carolina, in particular, is an exception to this trend because it is a major exporter of education graduates to other states.[7]

There are three issues relating certification tests to teacher supply. These are its impact on the size, composition, and quality of that supply.

Size of the Teacher Pool: Testing further decreases the number of in-state graduates available for initial certification. When state officials set or readjust cutoff scores for these written tests, they know what percentage of the current in-state test-takers will fail to pass. In essence, they are making a decision which links directly to the state's teacher supply. For example, when South Carolina raised the passing NTE score in 1976, about half of the in-state graduates failed to pass. The state legislature reacted by asking the State Board of Education to report on the impact of the NTE score levels on the teacher supply and suggest alternatives. A legislative rider further stipulated that if no action was taken by the Department of Education, the NTE passing score level was to be lowered to its previous level (Stolz, 1979, p. 9; Sandifer, 1984, p. 3). In 1983, when the Florida State Board of Education approved the recommendation of the Education Standards Commission to raise cutoff scores for three of the four tests comprising the FTCE, they did so knowing the Commission had estimated it

[7]In 1984, North Carolina had 44 IHEs with teacher education programs, compared to 33 in Georgia, 28 in South Carolina, 27 in Florida, and 22 in Louisiana. Feistritzer, 1984, p. 32.

would increase the percentage failing the individual exams by 4% to 9% (Holihan, pp. 1-2). In 1984, Louisiana's newly elected Superintendent of Education lowered the passing scores for six of the subject area tests, citing the need to help ease the shortage of teachers in those subject areas (*Education Week*, June 6, 1984, p. 6).

Pass rates give some indication of this process. From 1978-1982, 22,000 candidates took Georgia's TCT: 78.4% passed on the first attempt, 8.2% on subsequent retakes, and the remaining 13.4% (approximately 2950 candidates) failed the exam. Passage of Florida's FTCE is a little more complicated because candidates must receive passing scores on four tests. Reviewing reported scores from 1980 through 1982, pass rates for the entire examination were consistently in the 80%-85% range.

Pass rates are influenced by the format of the qualifying score, that is how the scores of various individual tests contribute to determination of a passing score. When Louisiana first began using the NTE, the ETS reported a candidate's score as the sum of the Area and Weighted Common Examination scores. This allowed for compensation, i.e., a high score in the Area Examination could compensate for a low score in the Common Examination, or vice versa. In addition, this format accorded the two examinations about equal weight. When ETS replaced the Common Examination with the Core Battery tests, the format of the scoring changed, forcing candidates to receive passing scores on each individual test. First, ETS reporeted results for each of the three Battery tests separately instead of a single combined, weighted score. Second, the state set independent, minimum scores for each of the three core battery tests as well as the area exam, thereby eliminating the practice of higher scores on one exam compensating for lower scores on another (State of Louisiana Department of Education, 1983, pp. 100-101).

South Carolina made similar changes in the EEE, in part because pass rates were considered too high. In 1985, they converted the scoring format from a single raw score for all three sections of the test to specific pass rates for each of the three sections, e.g., 80% on the reading portion. One South Carolina dean predicted the change would have a substantial impact on the number of candidates qualifying for admission to his school.

The experience of Florida test takers illustrates how the format of the score can adversely impact on pass rates. Like the revised EEE, candidates taking the FTCE must achieve given pass rates on each of the four tests comprising the examination. Table 2 shows significant differences, especially for minority candidates, between pass rates for individual tests and the examination as a whole.

Pass rates, however, give a distorted view of the full impact of testing on the number of teacher candidates. Data from the Louisiana Department of Education identify the number of students who completed education programs in public and private Louisiana schools, the percentage of those completing the program who took the NTE for certification, and the number of those taking the exam who passed. These data, presented in Table 3, alter the picture. While a steadily larger percentage of test-takers passed the test, the actual number passing the test declined from 1451 to 1041 during the five-year period. To some extent this reflected the declining enrollment as indicated in the first column. However, it also reflected an increasing tendency on the part of graduates not to apply for certification in Louisiana, i.e., fewer graduates elected to take the exam. Thus in the first year, 86% of the graduates took the NTE, while five years later, 68% took the exam.

Composition of the Teaching Force: In all the states, written competency tests had a disproportionate impact on minorities. Cumulative statistics for 1978-1982 indicated that only 34% of the black candidates passed Georgia's TCT in the first attempt compared to 87% of the white students. When cumulative retakes are considered, whites still do slightly less than twice (1.8) as well. The pattern is similar in Florida. In 1982-83, blacks' pass rate on the four components of the FTCE ranged from 32% to 46% compared to 91% to 93% for whites. During the first five years, 15% of the blacks taking Louisiana's NTE passed compared to 63% of the whites. Moreover, while the number of graduates taking the NTE declined for both races, it has been more severe for blacks. Thirty-one percent of all Louisiana students taking the NTE in 1978 were black, compared to only 13% in 1982.

Table 2

PASS RATES OF FLORIDA GRADUATES TAKING THE FTCE

Date	% Passing Individual Test				% Passing Entire Exam
	Math	Reading	Writing	Pedagogical	
Whites					
Nov 1980	93	100	99	99	92
Apr 1981	94	98	98	99	91
Aug 1981	92	97	97	98	89
July 1982	96	98	98	99	93
Oct 1982	96	95	98	98	91
Feb 1983	95	97	97	99	91
June 1983	96	99	98	98	93
Blacks					
Nov 1980	62	85	54	77	31
Apr 1981	50	70	72	75	33
Aug 1981	43	56	64	66	29
July 1982	59	69	77	78	44
Oct 1982	58	55	70	66	32
Feb 1983	62	57	70	74	32
June 1983	64	80	76	68	46

(Source: Florida State Department of Education.)

Table 3

EXPERIENCE OF IN-STATE GRADUATES WHO TAKE THE NTE

	Complete Program	Took NTE	(%)	Pass	(%)
1978-79	2788	2409	86	1451	60
1979-80	2289	1925	84	1258	65
1980-81	2079	1555	75	1105	71
1981-82	1932	1469	76	1103	75
1982-83	1914	1305	68	1041	80

(Source: State of Louisiana Department of Education.)

Certification tests will have a radical impact on the composition of the teaching profession if these trends continue. In 1981, Florida certified 5,500 teachers of whom 3.6%, or approximately 200, were black. During the first five years of Georgia's certification exam, only 6.7% or 1,184 of 17,417 passing the exam were black. Blacks represented only about 5% of the total supply of new teachers certified in Louisiana during the first five years of its testing program (Smith, 1984, pp. 16, 17-18, 20).

These statistics raise concerns not only about the immediate impact on black students but also the long-term consequences for the composition of the teaching force. Donald Kauchak looked at these trends in Louisiana--low pass rates on the NTE, decline in number attempting the NTE, and decline in enrollment--and showed that fewer blacks were becoming teachers. Yet, blacks make up 29.4% of the state's population, 37% of the schoolchildren, and 34% of the teachers. While the latter has been a fairly stable statistic, the decline in black certification will eventually alter that statistic, especially since blacks compose around 47% of the more senior teachers (those with 15+ years of experience). (Kauchak, 1984, pp. 26-27) A study of the North Carolina public school system indicated that while black students comprised almost 30% of the state's school population in 1978, only 21%

of the elementary teachers and 18% of the high school teachers were black. (Washburn, 1980, p. 6) In North Carolina, which has a history of using the NTE, the question is whether current testing policies will aggravate this imbalance.

If the impact of testing on the teacher supply was the issue raised most often during the fieldwork, concern about the long-range implications for the composition of that supply was the other most consistently mentioned issue. Many speculated that should this trend continue, minorities would become severely underrepresented in the profession. For many this raised the problem of the teaching force not reflecting their student body and therefore failing to provide the needed role models. While there was widespread awareness of this fundamental issue, there were little or no solutions offered.

The experience of Louisiana suggests one other way the testing might be impacting on the composition of the teacher supply, making the state more dependent on out-of-state graduates. The percentage of out-of-state graduates certified to teach in the state was only 27.9% in the four years prior to a competency test requirement, but 45.4% during the four years after competency testing. These figures do not reflect any gradual yearly increase over the entire time period, but rather a jump in percentages between the two time frames. Because comparable time series data are not available for the other states, it is difficult to determine whether there was a similar impact in the other states.

Quality of the Teaching Force: Finally, a third major issue relating testing to the teacher supply is how states have provided stopgaps for teacher shortages and whether these stopgaps have been in conflict with the purposes of the testing.

Basically, teaching shortfalls have been made up by issuing emergency or provisional certification, teaching out-of-field, and lowering test scores. In addition, many states are proposing or enacting a politically popular fourth solution, alternate certification routes.

All five states have some form of emergency credential to allow those who have not met the education and/or testing requirement to fill vacancies when no certified teacher is available. For two states, teaching using these certificates represented a substantial portion of

the total teaching population. During the 1983-84 school year, 12% of the Florida and 17.6% of the Georgia classroom teachers had emergency credentials. (Feistritzer, 1984, p. 41)[8]

There are a variety of temporary certificates and permits. Some cover candidates who have either not taken or have failed to pass the certification test. For example, North Carolina has a 4-month interim certificate for out-of-state teachers who have not taken the NTE. Louisiana provides temporary employment permits for those who passed all but one of the NTE core and area tests. Some emergency permits deal with out-of-field teaching. North Carolina, for example, has provisional and endorsement certificates for teaching outside the area of certification or in a minor field. Georgia, also, issues provisional certificates for this purpose. Finally, there are emergency credentials for candidates who meet neither the education nor the testing requirements. Louisiana, for example, has a noncertified provision for those who have college degrees without the required education courses. North Carolina issues a class B certificate for provisional employees if they complete six hours each year toward their subject area.

The experiences of Louisiana illustrate not only how the testing requirement has aggravated an existing teacher supply problem but how they contribute to the perception that emergency certification is in antithesis to the purpose of competency testing. As one state official pointed out, "After you raise the standards, it seems inevitable that you create emergency certification procedures." Since the introduction of emergency teaching and temporary employment permits to those who failed to pass the NTE, the number teaching under these certificates has steadily increased, from 168 in the 1979-80 school year, to 562 three years later. Although this is a very small number for a statewide teaching force of over 42,000, it is worrisome when compared to the decreasing number of regular teaching certificates issued each year. This number had been in decline prior to the introduction of competency testing. Since the 1978 introduction of the NTE, the number of in- and out-of-state graduates certified declined almost 39% over a five-year

[8]Comparable figures were South Carolina, 3.9%; Louisiana, 1%; North Carolina, 0.02%.

period, from 3460 to 2080. Adding 1982-83 school year emergency certificates to 1982 newly issued regular certificates, it appears that a little over 1/5 of the new teacher force had failed to qualify on the state's competency test.

Teaching out-of-field has been another response to teacher shortages, especially those occurring in specific subject areas. For example, in North Carolina, an estimated 20% of the 9 to 12 grade classes were taught out-of-field in 1983. Statistics ran higher for specific fields. For example, 44% of the physical science teachers and 27% of the physics teachers had not been certified in their subject areas. That state's issuance of provisional certificates has been one effort to deal with the problem.

There is some concern that testing is contributing to the problem. In states that test for specialization areas, there have been complaints that standards have been unevenly applied. In North Carolina, for example, the state-developed teacher competencies for various subject areas were perceived as uneven, more rigorous in some subjects than others. In fact, curriculums developed for some of these subjects may not be covered in just four years, a situation that can only exacerbate supply problems in those areas. In Louisiana there were complaints about the conflicting standards applied to NTE area tests. For example, pass rates for the English area exam were set at the 6th percentile compared to the 68th percentile for math. Teacher shortages in math and other subject areas prompted the Superintendent of Education to lower passing scores, in the case of math to the 39th percentile. (Education Week, June 6, 1984, p. 6) Thus, Louisiana officials were forced to invoke another strategy to deal with teacher shortages, lower the standards they had previously set.

The unevenness of the standards applied to various fields has led some to suggest that testing might actually encourage candidates to obtain certification in the easier fields and then teach out-of-field in the subjects which have more difficult certification requirements. Again, the impact would be to circumvent the very goals of the testing program.

Many draw the conclusion that as long as provisional certification routes exist, there will be "escape routes" which in essence negate the policies and goals set forth in state testing policies. Organizations like the Georgia Association of Educators want provisional certification eliminated. They feel it would force the states to deal with the teacher shortage by improving the conditions of teaching, especially raising salary levels. Making teaching a more attractive career, almost everyone interviewed agreed, is the only long-term solution to supply problems.

Ironically, one solution all five states have studied is setting up alternate routes for certification which minimize any education requirements. For example, the Louisiana Council of Deans of Education unanimously approved a proposal of the State's Education Board making B.A. liberal arts graduates eligible to teach secondary schools (AACTE Briefs, May 1985, p. 3). The South Carolina Education Improvement Act of 1984 allows persons with bachelor's degrees in areas of critical need to be certified without meeting all the regular requirements. Florida has a program which gives a teacher three years to meet the certification requirements but does not require a degree in education. When the program was instituted in the 1983-84 school year, the number of applicants taking the FTCE, the state's written certification test, increased in part because applicants no longer had to be graduates of approved teacher programs. However, state officials questioned whether this alternate route will increase the teacher supply because many of these graduates seemed to be taking the examination as a means of increasing their employment options rather than because they wanted to make teaching their career. There was also some question whether local school districts would want to hire candidates with so little preparation (Florida State Department of Education, 1984, pp. 15-16). As in the case of emergency teaching permits, alternate certification routes appear to negate some of the purpose for testing requirements.

Impact on Local School Districts: Certification testing has only limited direct impact on local school districts. Except in the case of provisional certification, local districts deal with teacher candidates only after they had passed the written examination. So the most direct

link between the written test and the local district is that local officials wanted to know whether the candidate has passed the examination. Scores are not automatically reported to the local district and the officials we interviewed did not use the score as a gauge of relative quality.

This lack of interest probably had more to do with the impact the written tests have on an already declining teacher supply than other considerations. For example, in Louisiana, a school official in an attractive school district observed that applications for teaching positions declined by over one half after the NTE was instituted. He felt his district could no longer be as selective in its hiring, and passage of the NTE almost guaranteed an applicant a job.

Even when certified teachers are available, getting in-field applicants is proving difficult for some teaching fields. One Georgia dean told of a request from a local school district to recommend graduates for 30 available teaching positions. The dean could not provide one in-field name.

Interviews suggested several strategies have been employed to deal with these shortages. A South Carolina dean observed that local school districts are offering higher salaries to attract better but fewer teachers, as a way to cope with the shortage. A North Carolina school district official noted that wealthier school districts often add to the state teacher salaries to attract qualified applicants. In an era of shortages in certain fields, the competition for a limited pool of in-field teachers means that less attractive school districts are more likely to have to deal with the shortfall.

IMPACT OF PERFORMANCE ASSESSMENTS

Four states have established performance assessment programs for beginning teachers. Three link satisfactory passage to attainment of full or more permanent teaching certificates. In one state, results influence employment contracts.

Observation

State	Instrument	Role in Certification
Florida	PMS (all but Dade Co.)	recommendation for certification
Georgia	TPAI	qualify for renewable professional certificate
North Carolina	TEE-based instrument	recommend award of continuing certificate
South Carolina	APT	issuance of annual continuing, provisional or no contract

Effects on Schools of Education: Colleges of education bear some responsibility for performance assessment programs during two phases of candidates' progress toward full certification. First, schools must prepare preservice students to successfully pass the tests. Second, faculty members often contribute directly or indirectly to assessments of beginning in-service teachers.

The necessity to adequately prepare students led most schools to review their curriculum to make sure their course work covered the relevant competencies and teaching methods. The result, according to the assistant dean of Georgia State University, is that faculties have "telescoped" their lessons to the assessment program's objectives (Education USA, 1985). Most schools administer the observation instrument itself during student teaching, in several instances using it as an exit test. In South Carolina, which requires use of the APT during student teaching, one dean questioned the value of an assessment tool if candidates are exposed to it three times during student teaching, and another three times as a beginning teacher.

Participation in the assessment program itself appears to vary among individual schools. Almost all the state schools we talked with had some faculty trained as observers who, in turn, trained local school and other participants. Many had some faculty acting as members of evaluation teams. Fewer still had arrangements with local school districts to develop remedial and staff development follow-up services.

Three factors appear to influence the extent of each school's response: cost, logistics, and individual initiative in the absence of any formal design for participation. Generally, the schools of education have had to pay most of the costs associated with their participation, a circumstance that stretched existing budgets and prompted many complaints from deans we interviewed. These include not only the cost of holding training or remedial programs, but also the expenses related to faculty time and travel.[9] As a result, some schools have limited participation. One Florida school, for example, has several faculty acting as trainers but no faculty participating in observation teams due to the cost. In another Florida state school, ten percent of the faculty participate, but on a gratis basis with no release time.

Logistics further contribute to the cost paid by the school. One South Carolina dean complained that trying to administer three APT evaluations during student teaching had really "stretched" the college's facilities, while a fellow dean noted that his faculty spent 75% of their time doing paperwork related to administering the APT. Geographic factors increase both time and expenses if schools of education and/or local school districts are located in rural areas.

Finally, the assessment programs provide no established mechanism for facilitating school of education involvement in a program administered in another education system, the public schools. North Carolina deans were particularly vocal about this flaw in the system, especially since the genesis of that state's program was the promotion of a partnership between the two education systems. In explaining his

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[9]One observer suggested that in Florida, faculty participation is encouraged by the judicious placement of research grants.

school's lack of participation, the dean of one North Carolina school noted there was neither money nor opportunity. As another North Carolina dean commented, the state's policy is "proactive," that is, would-be college participants must instigate arrangements with local school districts on their own initiative.

Effects on the Teacher Supply: While written tests have had a substantial impact on the teacher supply, the more recently implemented performance tests do not appear to have had much direct influence so far. In all four states, observers reported that only a handful of teachers had lost their jobs as a direct result of the observation tests.

The experience of Georgia, which has had such a program in place the longest of any state, is instructive. Under that program, beginning teachers have three years to pass two consecutive observations using the TPAI. Of the 1758 teachers who entered the program in 1980, 74% were successful. However, most of the remaining 26% either were not asked to return by their school districts or chose not to continue teaching for a variety of reasons. Of the original number, only eleven teachers required a sixth assessment and only two were denied certificates for failure to pass the program. (Brouillet, 1984, p. 31)

In South Carolina, passage rates in the trial use of the APT instrument were over 80%, prompting Josef Stulac, executive director of the task force charged with implementing the state's competency testing program, to comment that "if that many teachers are going to pass...results should be used to provide information for staff development or the assessment effort will not have made much of a difference" (National Assessment, 1981, p. 3).

Effects on Local School Districts: Performance assessment systems have impacted on local school districts in a number of ways. First, states have generally delegated the responsibility for running the program to the local school districts. Second, school districts' new role in the certification process has raised some legal questions. And third, local districts face the prospect of having such assessment programs expanded to include already certified teachers.

The experiences of local school districts in implementing the assessment program echo that of the schools of education. Both have had trouble with limited resources. For the most part, local school districts have had to worry about obtaining trained personnel for the observation teams and administering the program. This is particularly true of Florida, where no direct state money contributed to building the program. In a first-year survey of Florida's beginning teacher program participants, the most frequently cited weaknesses were the lack of time and money to implement the program. Peer teachers complained they were not given release time or extra pay for participating in the program. Finally, the survey and our interviews highlighted complaints about the added burden of recordkeeping and administrative requirements. (Florida State Department of Education, 1983, pp. 8, 30, 52, 105) Similarly, a North Carolina local district official worried that no funds were earmarked to provide training and compensation for members of the support team assigned to each probationary teacher in his school system. Without state and local investments in the program, he felt the program would fail.

The exception to this trend is the state legislature of Georgia which funds 17 regional assessment centers to train observers and administer the assessment program, thereby taking some of the cost and administrative burden out of the hands of the local districts.

The lack of reimbursement for peer teachers participating in these programs has led to speculation of future contract disputes. In Florida, the Florida Teaching Profession-NEA has stipulated in its contract negotiations with local school districts that teachers participate on a voluntary basis and in a limited role.

Finally, the lack of funds devoted to the remedial and staff development aspects of these programs has resulted in sporadic provision of such services, primarily in wealthy local districts or where others, such as colleges of education, pick up some of the costs. In Georgia, for example, the legislature, which appropriates $2.5 million per year to that state's performance assessment system, allocates the funds only to the cost of developing and maintaining the assessment systems despite repeated requests from the Georgia Department of Education to provide

funding for the technical assistance elements of the program (Andrews, 1982, p.15).

Drawing local school districts into the certification process has raised some turf issues, as well as possible legal complications. For example, one district official feared that if his district did not want to keep a probationary teacher there might be a conflict with the sponsoring university which has a vested interest in seeing that teacher certified.

Potential problems arise out of the local school district acting as both a certifier and employer of new teachers. In North Carolina, local districts have a three-year trial period before granting tenure. District officials feared the teacher appraisal program forces a much earlier tenure decision because it will be difficult to deny tenure to a teacher they have already recommended for certification. A committee report to the North Carolina State Board of Education cited a potential legal problem in "the fact that the employing principal plays a supportive rather than a primary role in the certification process. However, the principal is primarily responsible for making employment continuation and status recommendations. If the decisions are not identical, one or more parties may be legally vulnerable." (Liaison Committee, 1981, p. 42)

Finally, the establishment of an assessment program for new teachers has encouraged state policymakers to expand its application to all teachers. All four states have plans or proposals to use the same or similar assessment systems for the purpose of recertification, career ladders or staff development. Thus, school districts face the prospect of increased administrative burdens as well as the possible loss of some veteran teachers.

THE POLITICS OF TEACHER TESTING

A final impact of teacher testing has been to signal political shifts in the control of the teaching profession. The net effect of the requirements enacted in these five states has been for state officials--the legislature, department of education, and board of regents--to increase their control over who becomes a teacher. This accrual of power at the state level is within the tradition of centralized

education which predominates in the southern states. Basic curriculums, diploma requirements, and teachers' salaries are set by the state government. There is a natural progression from state requirements for competency testing in the public schools to state requirements for testing teachers.

One indication of how testing policies have continued this pattern of centralization is the growth in state bureaucracies to track and administer the programs. North Carolina created a new Personnel Services Division in the State Department of Public Instruction. With a staff of 40 at the state level and 200 in eight regional offices, the new division combines the functions of certification, performance appraisal, program approval, and staff development. Georgia set up a network of 17 regional centers staffed by 80 full-time data collectors to administer the TPAI. South Carolina expanded its research staff in the department of education.

Education systems in these states are also highly politicized, with key personnel often elected to office, as in the case of Louisiana's superintendent of education. It therefore should not be too surprising that the legislatures began playing an increasing role in formulating specific policies and requirements.

Educators, however, perceive a number of drawbacks when legislative involvement is too detailed. If education legisltion is too specific, itemizing competencies, pass rates, and other implementation questions, there is less flexibility to make real-world adjustments when the time frame or aspects of the policy prove unrealistic or detrimental. Educators are boxed in until the legislature repeals or amends the requirements. This happened in Florida when the legislature tied program approval to 80% of the graduates passing the FTCE. The guidance did not take into consideration the devastating effect such an arbitrary cutoff would have on very small programs, vulnerable if only one student failed the test. Similarly, there are complaints that legislatures are impatient for results, imposing unrealistic implementation deadlines, passing programs before sufficient funds are available or legislating new requirements before the effects of the previous requirements are known. In a 1984 address to state legislators trying to figure out how to fund past policies at the same time they were mandating new ones,

Florida's Education Commissioner called for a slowdown in legislated reforms. He warned, "We must continue to implement the changes that can be made now and move responsibly to greater improvements at the pace the legislature can fund and to which the people involved can reasonably adjust" (Breckenridge, 1984, p. 7).

Much of the increase in control at the state level has been at the expense of the individual schools of education. With the advent of testing, graduation from a school of education is no longer the major determinant in certification. Moreover, by tying program approval to certification testing, the states have a powerful club to influence both a school's admissions policies and curricula.

The fallout from testing policies has had other political costs for the IHEs. For example, the reaction of the Board of Regents in Louisiana to the poor performance of many students from state schools was to impose an admissions requirement on its member schools. Some schools filed a court case on the basis that the IHE, not the state board, had the right to determine its own admissions policies. The case was never resolved because the state legislature mandated a standardized admissions test.

Finally, competency testing policies have introduced a new participant in the certification decision. Local school districts not only employ teachers but also have an input into the decision to issue more permanent certification. The extent of their influence on the process and the teaching profession has yet to be determined. However, inevitably turf issues will arise as schools of education lose more control over the certification process. In North Carolina, one dean perceived the intended partnership and shared accountability envisioned in the state's Quality Assurance Program has gone awry. Instead of promoting the mutual advantages, the teacher education institutions and public schools have concentrated their efforts on usurping certain activities. From the dean's point of view, it appeared that the local school districts had already "wrenched" teacher certification from teacher education institutions rather than giving them an established role in the review of beginning teachers.

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